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Design and Installation of High Capacity Centralized Coolant Pump for Optimization of Power Consumption using VFD Controller

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Abstract: *This paper discuss the pumping system study involved detailed discussions with Maintenance Engineers. The flow, pressure and power measurements for the pumps were done with the advanced instruments available with GIN. A total of around 2 Pumps were studied during the audit period. We find that there is a good amount of saving potential available on replacement of the pumps with Energy Efficient pumps call it a variable speed drive, adjustable frequency drive, adjustable speed drive, AC drive, inverter drive or something else, a variable frequency drive (VFD) can reduce the energy usage of an electric motor up to 90%, extend motor life, deliver a payback in as little as 6 months and often qualify for energy-saving financial incentives. Since HVAC consumes the most energy in a building and motors account for the majority of HVAC energy usage, using VFDs on pump and fan motors can result in substantial energy cost reductions.*

Keywords: Centralized coolant system, VFD, Three phase AC motor, Transmitter

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